# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON

PASCO SCIENTIFIC,

Case No. 3:21-cv-01523-IM

Plaintiff,

**OPINION AND ORDER** 

v.

VERNIER SOFTWARE & TECHNOLOGY LLC,

Defendant.

Christian E. Mammen and Carrier Richey, Womble Bond Dickinson LLP, 1841 Page Mill Road, Suite 200, Palo Alto, CA 94304. John David Wooten IV, Womble Bond Dickinson LLP, 300 North Greene Street, Suite 1900, Greensboro, NC 27401. Attorneys for Plaintiff.

Siddesh Pandit and Timothy Joseph Maier, Maier & Maier, PLLC, 345 South Patrick Street, Alexandria, VA 22314. Klaus H. Hamm, Klarquist Sparkman, LLP, One World Trade Center, 121 SW Salmon Street, Suite 1600, Portland, OR 97204. Attorneys for Defendant.

### IMMERGUT, District Judge.

This is a patent infringement claim under 35 U.S.C. § 271, brought by Plaintiff PASCO Scientific against Defendant Vernier Software & Technology LLC. ECF 1. PASCO holds United States Patent Numbers 10,481,173 ("the '173 patent") and 10,753,957 ("the '957 patent") (collectively, "the patents") covering Plaintiff's "Smart Cart," a technology used for conducting classroom science experiments to study kinematics and dynamics. *Id.* at ¶ 1–2. Plaintiff claims

that Defendant infringed on the '173 and '957 patents by producing a near-identical product, the "Go Direct Sensor Cart." See id. at ¶ 2.

This matter comes before the Court on Defendant's Motion to Dismiss for Failure to State a Claim. ECF 20. Defendant argues that Plaintiff's patents "cover[] a method of collecting and analyzing data implemented using generic and well-known hardware or provides for generic and well-known hardware configured to implement such a method" and is thus ineligible for patent protection under 35 U.S.C. § 101. *Id.* at 5.

For the reasons stated below, this Court finds that Plaintiff's patents were not directed at an abstract idea and, even if they are, contain inventive concepts which bring them within the ambit of patent protection. Thus, Defendant's Motion to Dismiss, ECF 20, is DENIED.

#### **STANDARDS**

As this action arises under the Patent Act, Federal Circuit Law applies to the analysis of patent issues. *See Globetrotter Software, Inc. v. Elan Comput. Grp., Inc.*, 362 F.3d 1367, 1374 (Fed. Cir. 2004). Ninth Circuit law applies to procedural issues not pertaining to patent law. *See Merck & Co., Inc. v. Hi-Tech Pharmacal Co., Inc.*, 482 F.3d 1317, 1320 (Fed. Cir. 2007).

A motion to dismiss for failure to state a claim may be granted only when there is no cognizable legal theory to support the claim or when the complaint lacks sufficient factual allegations to state a facially plausible claim for relief. *Shroyer v. New Cingular Wireless Servs.*, *Inc.*, 622 F.3d 1035, 1041 (9th Cir. 2010). In evaluating the sufficiency of a complaint's factual allegations, the court must accept as true all well-pleaded material facts alleged in the complaint and construe them in the light most favorable to the non-moving party. *See Daniels-Hall v. Nat'l Educ. Ass'n*, 629 F.3d 992, 998 (9th Cir. 2010). To be entitled to a presumption of truth, allegations in a complaint "may not simply recite the elements of a cause of action, but must contain sufficient allegations of underlying facts to give fair notice and to enable the opposing PAGE 2 – OPINION AND ORDER

party to defend itself effectively." *Starr v. Baca*, 652 F.3d 1202, 1216 (9th Cir. 2011). The court must draw all reasonable inferences from the factual allegations in favor of the plaintiff. *Newcal Indus., Inc. v. Ikon Off. Sol.*, 513 F.3d 1038, 1043 n.2 (9th Cir. 2008). The court need not, however, credit the plaintiff's legal conclusions that are couched as factual allegations. *Ashcroft v. Iqbal*, 556 U.S. 662, 678–79 (2009).

A complaint must contain sufficient factual allegations to "plausibly suggest an entitlement to relief, such that it is not unfair to require the opposing party to be subjected to the expense of discovery and continued litigation." *Starr*, 652 F.3d at 1216. "A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Iqbal*, 556 U.S. at 678 (citing *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 556 (2007)). "The plausibility standard is not akin to a probability requirement, but it asks for more than a sheer possibility that a defendant has acted unlawfully." *Mashiri v. Epsten Grinnell & Howell*, 845 F.3d 984, 988 (9th Cir. 2017) (quotation marks omitted).

#### **BACKGROUND**

The following facts are taken from Plaintiff's Complaint. *See Wilson v. Hewlett-Packard Co.*, 668 F.3d 1136, 1140 (9th Cir. 2012) ("On a motion to dismiss, all material facts are accepted as true and are construed in the light most favorable to the plaintiff."). Plaintiff is a science education company that since 1964 has created and manufactured "science education tools and datalogging solutions." ECF 1 at ¶ 1. In 2016, Plaintiff launched its Smart Cart Demonstration Kit, an updated version of its original Aluminum Dynamics Cart, originally introduced in 1992. *Id.* at ¶ 2. The Smart Cart is a "low-friction dynamics cart with onboard wireless sensors that measure force, position, velocity, three degrees of freedom in acceleration, and rotational motion." *Id.* at ¶ 14. The Smart Cart can connect wirelessly to a computer or tablet PAGE 3 – OPINION AND ORDER

via Bluetooth or to a computer or charge via a USB cable. *Id*. The Smart Cart is packaged with a magnetic bumper, force hook, rubber bumper, and a USB charging cable. *Id*.

On January 5, 2016, Plaintiff filed the patent application that led to the issuance of the '173 and '957 patents. *Id.* at ¶¶ 2, 14. The '173 patent is titled "Wireless smart devices having integrated force, position, acceleration, and rotational sensing for science education." *Id.* at ¶ 10. The United States Patent and Trademark Office ("PTO") issued the '173 patent on November 19, 2019. *Id.* The '957 patent, bearing the same title, is a continuation of the '173 patent. *Id.* at ¶ 11. The PTO issued the '957 patent on August 25, 2020. *Id.* 

In January 2018, Defendant released its Go Direct Sensor Cart, which Plaintiff describes as "near-identical" to the Smart Cart. *Id.* at ¶¶ 2, 15. Plaintiff describes the Go Direct Sensor Cart as having "the same look, feel, function, and capabilities" as the Smart Cart. *Id.* at ¶ 15. Plaintiff alleges that Defendant designed the Go Direct Sensor Cart to have the same wheelbase as the Smart Cart, such that it could be used on Plaintiff's tracks. *Id.* at ¶ 16. The Go Direct Sensor Cart User Manual describes the Go Direct Sensor Cart as an educational tool which "can be used for hands-on kinematics and dynamics demonstrations but can also be used as a force or acceleration sensor" and can connect via Bluetooth to a mobile device or computer. *Id.* at ¶ 17 (quoting ECF 1-3, Ex. C, at 2).

On January 9, 2020, Defendant received a letter from Plaintiff identifying the '173 patent and the aspects of the Go Direct Sensor Cart that meet the claims of the patent. *Id.* at ¶ 20. On September 4, 2020, Defendant received a second letter from Plaintiff identifying the '957 patent and the aspects of the Go Direct Sensor Cart that meet the claims of the patent. *Id.* Plaintiff then brought this suit on October 18, 2021, alleging ongoing infringement that it "deliberate, willful,

and knowing, with conscious disregard of [Plaintiff's] rights" because the two letters put Defendant on notice as to the infringement. *Id.* at ¶ 21.

#### DISCUSSION

Plaintiff alleges that Defendant has directly infringed upon the '173 and '957 patents under 35 U.S.C. § 271(a) and has indirectly infringed upon the patents under 35 U.S.C. § 271(b) and/or (c). *Id.* at ¶ 24, 30, 37, 43. In its motion to dismiss, Defendant argues that the '173 and '957 patents are ineligible for patent protection under 35 U.S.C. § 101 based on the two-step test established by the Supreme Court in *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208 (2014). *See* ECF 20 at 5–6. Patent-eligibility under 35 U.S.C. § 101 is a question of law, but the "inquiry may contain underlying issues of fact." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). Patent-eligibility can be determined at the Rule 12(b)(6) stage "only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law." *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

Under Section 101, an invention is generally patentable if it is a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. But "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (internal quotation marks omitted). These are "specific exceptions to [Section] 101's broad patent-eligibility principles," *Bilski v. Kappos*, 561 U.S. 593, 601 (2010), designed to guard against undue preemption of innovation and invention, *Alice*, 573 U.S. at 216 (citing U.S. Const., Art. I, § 8, cl. 8). In applying these exceptions, a court "must distinguish between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more." *Id.* at 217 (internal quotation marks omitted).

PAGE 5 – OPINION AND ORDER

Alice sets out a two-part test for Section 101. First, a court determines "whether the claims at issue are directed to a patent-ineligible concept" such as an abstract idea, law of nature, or natural phenomenon. See id. at 218. It is often "sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases" for purposes of the step one analysis. Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1334 (Fed. Cir. 2016). The Supreme Court has warned courts to "tread carefully in construing this exclusionary principle lest it swallow all of patent law" because "[a]t some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." Alice, 573 U.S. at 217 (internal quotation marks and citation omitted). "[A]pplication[s] of such concepts to a new and useful end . . . remain eligible for patent protection." Id. (internal quotation marks and citation omitted); see also BGS Tech LLC v. BuySeasons, Inc., 899 F.3d 1281, 1287 (Fed. Cir. 2018) ("For an application of an abstract idea to satisfy step one, the claim's focus must be something other than the abstract idea itself.").

Second, if a patent is directed to a patent ineligible concept, the second step in *Alice* is to look for an "inventive concept—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Alice*, 573 U.S. at 217–218 (internal quotation marks and citation omitted). The question at this step is "[w]hat else is there in the claims before [the court]?" *Mayo Collaborative Servs.*, 566 U.S. at 78. The answer must include something "significantly more" than the abstract idea itself. *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). "It is well-settled that mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea. Rather, the components must involve more than performance of 'well-understood, routine, conventional activit[ies] previously known to the

industry." *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (quoting *Alice*, 573 U.S. at 225). In addition, merely reducing an abstract concept to a particular technical platform is not enough to provide the inventive element needed to support a patent. *See Elec*. *Power Grp.*, *LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). "If a claim's only 'inventive concept' is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea." *BSG Tech.*, 899 F.3d at 1290–91.

## A. Claim 1 of the '173 Patent Is Not Representative

Defendant urges this Court to treat Claim 1 of the '173 patent as representative. ECF 20 at 14 (citing *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014) and *Alice*, 573 U.S. at 212). Defendant argues that "all six independent claims and all of the dependent claims recite the same abstract idea of collecting, analyzing, and occasionally displaying experimental data, collected from a generic set of sensors." *Id.* This Court disagrees.

The dependent claims do not simply reiterate the concepts introduced in Claim 1. Rather, they give further instruction on how to effectuate the independent claims. For example, Dependent Claims 2 and 3 of the '173 patent explain *where* the optical shaft encoder and gyroscope are placed within the device. '173 Patent col. 7 l. 31–39. Independent Claim 8 of the '173 patent specifies that the device is a cart, rather than some other device. '173 Patent col. 7 l. 64.

Defendant states conclusively that comparing "each dependent claim to the representative claim reveals that they do not provide any inventive concept." ECF 20 at 15. But, as will be explained in more detail below, the dependent claims explain how the Smart Cart is composed

and Plaintiff argues that its design makes it an improvement over the prior art. In declining to treat Claim 1 of the '173 patent as representative, this Court is mindful that it must not "overgeneralize[e] claims" in such a way as to essentially reduce the invention to an unpatentable idea. *Enfish*, 822 F.3d at 1337 (citing *Diamond v. Diehr*, 450 U.S. 175, 189 n.12 (1981)).

## B. The Patents Are Not Aimed at an Abstract Idea Under Alice Step One

Defendant argues that Plaintiff's patents are directed at the abstract idea of "collecting, analyzing, and potentially displaying information." ECF 20 at 17. Plaintiff responds that its patents are "directed to specific improvements to pre-existing equipment for use in school science experiments." ECF 23 at 21. Defendant replies that "claims directed to a method of teaching" are still patent ineligible." ECF 25 at 6–7.

It is true, as Defendant states, that collecting, analyzing, and presenting information are abstract concepts, either singly or in combination. *See Elec. Power Grp.*, 830 F.3d at 1354 ("The advance [the patent claims] purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions. They are therefore directed to an abstract idea."). But casting Plaintiff's claims as merely collecting, analyzing, and presenting information demands that this Court engage in the oversimplification that the Supreme Court and the Federal Circuit have cautioned against. *See Diamond*, 450 U.S. at 189 n.12 ("To accept the analysis proffered by the petitioner would, if carried to its extreme, make all inventions unpatentable because all inventions can be reduced to underlying principles . . . which, once known, make their implementation obvious."); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) ("We have previously cautioned that courts must be careful to avoid

oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims." (internal quotation marks and citation omitted)); *Enfish*, 822 F.3d at 1337 ("[D]escribing the claims at such a high level of abstraction . . . all but ensures that the exceptions to § 101 swallow the rule.").

To be sure, the Smart Cart collects, analyzes, and displays data via the accelerometer, optical encoder, gyroscope, and force load cell. See '173 Patent at 14–15; '957 Patent at 13–15. But the patent claims are not *directed* at those abstract ideas just because they are part of the Smart Cart's functioning. Rather, the patent claims are directed at "solv[ing] the problem of simultaneously measuring motion, force, linear acceleration, and slope with high accuracy and time synchronization." '173 Patent col. 21. 45–48; '957 Patent col. 21. 52–55. Prior art was made less accurate both by having wired connections and by "infer[ing acceleration] through calculation of the second derivative of position." '173 Patent col. 21. 52–54; '957 Patent col. 21. 59–61. Additionally, in the prior art "[n]o practical means exist[ed] to measure a slope of the cart in movement." '173 Patent col. 1 l. 24-26; '957 Patent col. 1 l. 31-33. This Court agrees with Plaintiff that the claims here are similar to those in *Thales Visionix, Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017). There, claims directed to "systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative positions and orientation of a moving object on a moving reference frame" were patent-eligible at Alice step one. *Id.* at 1348–49. The Federal Circuit reasoned that "the application of physics [can] create an improved technique for measuring movement of an object on a moving platform" and that the "claims [were] directed to a new and useful technique for using sensors to more efficiently track an object on a moving platform." *Id.* at 1349. Similarly, here, Plaintiff has invented an improved

technique for measuring acceleration and slope during physics experiments and has implemented a new and useful technique for using sensors more efficiently to do so.

Nor are Defendant's arguments more persuasive when casting Plaintiff's patent as "a method of teaching." ECF 25 at 6–7. Defendant cites Justice Stevens's concurrence in *Bilski* to analogize "teaching" or "instruction" to "a series of dance steps," "a method of shooting a basketball, [or] "maybe even words, stories, or songs if framed as the steps of typing letters or uttering sounds"—a class of processes that Justice Stevens states would be "almost comical" to grant Section 101 patent protection. *Id.* at 8 (quoting *Bilski*, 561 U.S. at 624). Indeed, Justice Stevens also invoked one of the Patent Act's main drafters, who wrote that "the techniques of teaching a course in physics, chemistry, or Russian is not a patentable invention because it is outside of the enumerated categories of 'process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." *Bilski*, 561 U.S. at 641 (citing Giles S. Rich, Principles of Patentability, 28 GEO. WASH. L. REV. 393, 394 (1960)). But Plaintiff's patents do not claim to invent a new *technique* of teaching a physics class. Rather, they claim to invent an improvement upon a type of machine (a cart that measures acceleration) *used in the process* of teaching a physics class.

For these reasons, the '173 and '957 patents are not directed at an abstract idea—either collecting, analyzing, and displaying data or a method of teaching. Rather, they are directed at a new and useful improvement of a machine. Accordingly, Defendant's Motion to Dismiss, ECF 20, is denied.

C. Even If the Patents Were Aimed at an Abstract Idea, They Contain "Inventive Concepts" Under *Alice* Step Two

Having determined that the patents are not directed to an abstract idea, this Court need not proceed to *Alice* step two. *Thales Visionix*, 850 F.3d at 1349; *Enfish*, 822 F.3d at 1339. Still, this Court notes briefly that the patents contain inventive concepts—or, at least, factual issues regarding inventive concepts—that preclude dismissal.

First, as noted above, the Smart Cart, unlike prior art, incorporated a way to measure slope—specifically the use of a gyroscope. '173 Patent col. 1 l. 24–26, col. 2 l. 54–55; '957 Patent at col. 1 l. 31–33, col. 2 l. 61–62. Second, unlike prior art, the Smart Cart's use of exclusively internal sensors increases the accuracy of acceleration measurements measurements. *See* '173 Patent col. 2 l. 52–54; '957 Patent col. 2 l. 59–61. Third, unlike prior art, the Smart Cart does not require the use of tracks. '173 Patent col. 7 l. 1–2; '957 Patent col. 7 l. 9–10. The patents assert that these improvements make it easier to conduct experiments by eliminating the use of multiple sensors and reducing the amount of human interaction. '173 Patent col. 2 l. 32–36, 52–57; '957 Patent col. 2 l. 39–43, 57–61.

Defendant does not argue that these are not improvements over the prior art. Rather,

Defendant argues that "[t]he use of generic and conventional hardware does not provide an

'inventive concept." ECF 20 at 23. This Court agrees with Plaintiff that the mere use of generic

or conventional hardware does not end the inquiry as to whether there is an inventive concept.

¹ At the very least "[w]hether the claim elements or the claimed combination are well-understood, routine, conventional is a question of fact." *Aatrix Software*, 882 F.3d at 1128. Defendant has not made any argument that the precise combination of elements described in the patents is conventional as a matter of law. Quite to the contrary, Plaintiff pleads—and this Court must take Plaintiff's well-plead allegations as true at this stage—that prior to its invention "[n]o practical means exist[ed] to measure a slope of the cart in movement," ECF 1-1, Ex. A, at 1:24–26; ECF 1-2, Ex. B, 1:31–33, and that "[p]rior to [the] embodiments of this invention it ha[d] been necessary to either use" external sensors or a combination of external and internal sensors, ECF 1-1, Ex. A, at 2:32–36; ECF 1-2, Ex. B, 2:39–43. Because "patent eligibility can be determined at the Rule 12(b)(6) stage . . . only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law," these factual issues provide an

In BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341 (Fed. Cir. 2016), the Federal Circuit found that "the limitations of the claims, taken individually, recite generic . . . components, none of which is inventive by itself." Id. at 1349. But the Federal Circuit recognized that "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." Id. at 1350 (emphasis added). There, "[t]he inventive concept described and claimed in the [patent] is the installation of a filtering tool at a specific location." Id. This represented "a technical improvement over prior art ways of filtering [Internet] content" because "prior art filters were either susceptible to hacking and dependent on local hardware and software, or confined to an inflexible one-size-fits-all scheme." Id. Here, the inventive concept is not in the use of an accelerometer or gyroscope, but in the positioning of those components within the Smart Cart. And, as noted above, this improved the prior art by eliminating the need for wired connections, grooved tracks, and external sensors, which increased accuracy (by directly measuring acceleration) and flexibility (by allowing users to conduct experiments without tracks).

This case is also distinguishable from Yu v. Apple Inc., 1 F.4th 1040 (Fed. Cir. 2021), which Defendant cites for the proposition that "a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery" does not provide an inventive concept. Id. at 1043 (quoting Smart Sys. Innovations, LLC v. Chi. Transit Auth., 873 F.3d 1364, 1371 (Fed. Cir. 2017)). In Yu, the abstract idea was "taking two pictures . . . and using one picture to enhance the other." Id. The Federal Circuit noted that this technique had been known to photographers for over a century and noted that the patentee, using conventional camera technology, was offering

alternate basis for denying Defendant's motion. *Aatrix Software*, 882 F.3d at 1125 (citations omitted).

the abstract idea itself as a solution to the problem of low-resolution images. *Id.* at 1043–44. Here, Defendant argues the patents are directed towards the abstract ideas of either (1) collecting, analyzing, and displaying data or (2) methods of teaching. But Plaintiff also endeavors to solve concrete problems: lack of accuracy in measurements and the required use of tracks in science experiments. Unlike in *Yu*, Plaintiff is not offering the abstract ideas themselves to solve these problems, but rather offering a specific configuration of components. *See Contour IP Holding*, *LLC v. GoPro, Inc.*, No. 3:17-cv-04738-WHO, 2021 WL 4148651, at \*8 (N.D. Cal. Sep. 13, 2021) ("Unlike *Yu* or other cases that [defendant] cites, I cannot find in its favor based only on the pleadings. If an abstract idea is applied in a non-generic environment and embodied a functional improvement, it succeeds at step one. If the claim elements in ordered combination change the nature of the claim into one that is not abstract, it succeeds at step two." (citations omitted)). In other words, Plaintiff is not offering the concept of collecting data as a solution to the lack of accurate measurements; instead, Plaintiff has patented a device that collects data in a certain way to obtain more accurate measurements than were previously available.

///

///

///

///

///

///

///

///

///

Case 3:21-cv-01523-IM Document 30 Filed 06/07/22 Page 14 of 14

**CONCLUSION** 

Plaintiff's patents are not directed at an abstract idea—either collecting, analyzing, or

displaying data or teaching. Thus, they are patent-eligible at *Alice* step one. Even if the patents

were directed at an abstract idea, they display inventive concepts both by featuring

improvements over the prior art and in solving concrete problems in the field of science

education. For these reasons, Defendant's Motion to Dismiss under Rule 12(b)(6), ECF 20, is

DENIED.

IT IS SO ORDERED.

DATED this 7th day of June, 2022.

/s/ Karin J. Immergut

Karin J. Immergut

United States District Judge